Silicon Solar Cell (276-0124) Specifications

Material:.....Single (Mono) Crystaline Silicon
Electrical Outputs
Voltage:.....0.55V
Current:.....0.275 - .3 amp
Voltage (at load):.....0.484V
Current (at load):.....0.250 - .275 amp
Light Level:.....1 Full Sun - based on standard test conditions which is solar irradiance of 1,000 W/M2, cell temperature of 25C
Temperature Effect:.....Remember, it is light not heat that produces the power. Cold temperatures have little effect on power, however, very hot conditions i.e. 100F+ will cause the voltage to drop lower.

SILICON SOLAR CELL
2 x 4cm - Easy to solder
Cat. No. 276-124

What type of material is the cell?
Single (Mono) Crystaline Silicon.

Does the cell have a coating?
Yes, blue anti-reflection, 95% light absorption coating.

What are the typical electrical outputs of the cell?
Voltage - Voc (open circuit) .55v
Current - Isc (short circuit) .275 - .3 amp
Voltage - Vmax (at load) .484v
Current - Imax (at load) .250 - .275 amp

What is the light level for the above power specification?
1 Full Sun - based on standard test conditions which is solar irradiance of 1,000 W/M2, cell temperature of 25 C.

How does temperature affect the power of the cell?
Remember, it is light not heat that produces the power. Cold temperatures have little effect on power, however very hot conditions i.e. 100 F+, will cause the voltage to drop lower.

Where are the negative and positive connections on the cell?
The front of the cell (blue/dark color) is negative, solder to the silver colored bar running across the front edge of the cell. The back of the cell is positive, solder anywhere on the back.

Are there any tips on soldering the cells?
Recommended soldering tip temperature is 650-700 F. Use thin wire (a single copper strand out of speaker wire works well). Put flux on cell first, put solder on tip, place wire on cell, drag tip across. Do not hold soldering tip down on cell in one spot, as this may lift the coating off the cell.

Are there any charts depicting solar cell response to color or frequency wavelengths?
Yes, refer to the following charts. Charts also show series and parallel connection of cells.

Silicon Solar Cell
(276-0124) Hints and Tips

Q: Which are the front and back of this cell in order to solder leads?

A: The front is blue/dark and is negative. Solder the lead to the silver bar on the front edge. The back is positive. The lead can be soldered to any place on the back.

Soldering Tips - Put flux on cell first. Put the solder on tip. Place wire on cell. Drag tip across wire. Do not hold solder tip down on cell in one spot as this may lift the coating off the cell.